Scientific and Technical Information Center

264300 **SEARCH REQUEST FORM** LB

Requester's Full Name: Cecilia Jaske Examiner #: 82613 Date: 6-23-08
Art Unit: 1634 Phone Number: 2-4931 Serial Number: 10516977
Location (Bldg/Room#): REM5/4B (Mailbox #): 5018 Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: See Bib Data Sheet

Inventors (please provide full names):

Earliest Priority Date:

Search Topic:
Please provide a detailed statement of the search topic, and describe as precisely as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

See claims attached. Please do structure search and inventor name (s). search. Display results to show identification of source, and R.N #, compound name & structure of identified compounds. Search compounds of Formula I as indicated

RECEIVED
JUN 23 2008
TECH CENTER 1600/2900

Please call with any questions

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher:	NA Sequence (#)	STN Dialog
Searcher Phone #:	AA Sequence (#)	Questel/Orbit Lexis/Nexis
Searcher Location:	Structure (#)	Westlaw WWW/Internet
Date Searcher Picked Up:	Bibliography	In-house sequence systems
Date Completed:	Litigation	Commercial Oligomer Score/Length
Searcher Prep & Review Time:	Patentee	Interference SPDI Encode/Translate
Online Time:	Other	Other (specify)

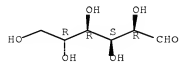
=> d ibib abs hitstr l20 1-1

L20 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:993756 HCAPLUS Full-text
DOCUMENT NUMBER: 146:583
TITLE: E3024, 3-but-2-ynyl-5-methyl-2-piperazin-1-yl-3,5-dihydro-4H-imidazo[4,5-d]pyridazin-4-one tosylate, is a novel, selective and competitive dipeptidyl peptidase-IV inhibitor
AUTHOR(S): Yasuda, Nobuyuki; Nagakura, Tadashi; Inoue, Takashi; Yamazaki, Kazuto; Katsutani, Naruo; Takenaka, Osamu; Clark, Richard; Matsunra, Fumiyoshi; Emori, Eita; Yoshikawa, Seiji; Kira, Kazunobu; Ikuta, Hironori; Okada, Toshimi; Saeki, Takao; Asano, Osamu; Tanaka, Isao
CORPORATE SOURCE: Tsukuba Research Laboratories, Eisai Co., Ltd., Tsukuba, Ibaraki, 300-2635, Japan
SOURCE: European Journal of Pharmacology (2006), 548(1-3), 181-187
CODEN: EJPHAZ; ISSN: 0014-2999
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Dipeptidyl peptidase IV (DPP-IV) inhibitors are expected to become a useful new class of anti-diabetic agent. The aim of the present study is to characterize the in vitro and in vivo profile of E3024, 3-but-2-ynyl-5-methyl-2-piperazin-1-yl-3,5-dihydro-4H-imidazo[4,5- d]pyridazin-4-one tosylate, which is a novel imidazopyridazinone-derived DPP-IV inhibitor. E3024 inhibited recombinant human and mouse DPP-IV with IC50 values of approx. 100 nM. E3024 inhibited DPP-IV in human, mouse, rat and canine plasma with IC50 values of 140 to 400 nM. In contrast, E3024 did not inhibit DPP-8 or DPP-9 activity. Kinetic anal. indicated that E3024 is a competitive DPP-IV inhibitor. In Zucker fa/fa rats, E3024 (1 mg/kg) reduced glucose excursion after glucose load, with increases in plasma insulin and active glucagon-like peptide-1 levels. In fasted rats, this compound did not cause hypoglycemia. In a rat 4-wk toxicol. study, no notable changes were found at doses up to 750 mg/kg. The present preclin. studies indicate that E3024 is a novel selective DPP-IV inhibitor with anti-diabetic effects and a good safety profile.

IT 50-99-7, D-Glucose, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study) (blood; evaluation of antidiabetic activity, safety, and pharmacokinetics of selective dipeptidyl peptidase-IV inhibitor E3024)
RN 50-99-7 HCAPLUS
CN D-Glucose (CA INDEX NAME)

Absolute stereochemistry.

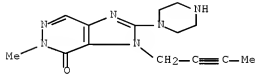


IT 915132-86-4
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(evaluation of antidiabetic activity, safety, and pharmacokinetics of selective dipeptidyl peptidase-IV inhibitor E3024)
RN 915132-86-4 HCAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 635717-65-6
CMF C14 H18 N6 O



CM 2

CRN 75-75-2
CMF C H4 O3 S

IT 9004-10-8, Insulin, biological studies 89750-14-1, Glucagon-like peptide-1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(evaluation of antidiabetic activity, safety, and pharmacokinetics of selective dipeptidyl peptidase-IV inhibitor E3024)
RN 9004-10-8 HCAPLUS
CN Insulin (CA INDEX NAME)

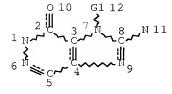
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 89750-14-1 HCAPLUS
CN Glucagon-like peptide I (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 54249-88-6, Dipeptidyl peptidase IV
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; evaluation of antidiabetic activity, safety, and pharmacokinetics of selective dipeptidyl peptidase-IV inhibitor E3024)
RN 54249-88-6 HCAPLUS
CN Peptidase, dipeptidyl, IV (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RESULTS FROM REGISTRY, CAPLUS, AND USPATFULL

=> d que stat l10
L5 STR



VAR G1=H/AK/AR
NODE ATTRIBUTES:
NSPEC IS C AT 11
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L7 22 SEA FILE=REGISTRY SSS FUL L5
L8 3 SEA FILE=HCAPLUS ABB=ON L7
L9 5 SEA FILE=USPATFULL ABB=ON L7
L10 8 DUP REMOV L8 L9 (0 DUPLICATES REMOVED)

=> d ibib abs hitstr l10 1-8

L10 ANSWER 1 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2007:101189 USPATFULL Full-text
TITLE: 2-AMINO-IMIDAZO[4,5-D]PYRIDAZIN-4-ONES, THEIR PREPARATION AND THEIR USE AS PHARMACEUTICAL COMPOSITIONS
INVENTOR(S): Eckhardt, Matthias, Biberach, GERMANY, FEDERAL REPUBLIC OF
Himmelsbach, Frank, Mittelbiberach, GERMANY, FEDERAL REPUBLIC OF
Langkopf, Elke, Warthausen, GERMANY, FEDERAL REPUBLIC OF
Hauel, Norbert, Schemmerhofen, GERMANY, FEDERAL REPUBLIC OF
Tadayyon, Mohammad, Ulm, GERMANY, FEDERAL REPUBLIC OF
Thomas, Leo, Biberach, GERMANY, FEDERAL REPUBLIC OF

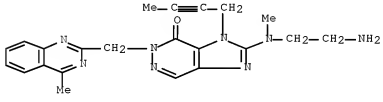
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070088038	A1	20070419
APPLICATION INFO.:	US 2006-609621	A1	20061212 (11)

RELATED APPLN. INFO.: Division of Ser. No. US 2005-102048, filed on 8 Apr 2005, GRANTED, Pat. No. US 7179809

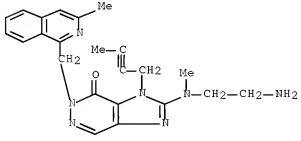
	NUMBER	DATE
PRIORITY INFORMATION:	DE 2004-102004017739200404l0	

DE 2004-102004025555220040525
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MICHAEL P. MORRIS, BOEHRINGER INGELHEIM CORPORATION, 900 RIDGEBURY RD, P. O. BOX 368, RIDGEFIELD, CT, 06877-0368, US
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 1297
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to 2-amino-imidazo[4,5-d]pyridazin-4-ones and 2-amino-imidazo[4,5-c]pyridin-4-ones of general formula ##STR1## wherein R.sup.1 to R.sup.4 and X are defined as in claims 1 to 6, the tautomers, the enantiomers, the diastereomers, the mixtures thereof and the salts thereof, which have valuable pharmacological properties, particularly an inhibiting effect on the activity of the enzyme dipeptidylpeptidase-IV (DPP-IV).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 866933-11-1P 866933-12-2P 866933-14-4P
866933-15-5P 866933-16-6P 866933-17-7P
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)
RN 866933-11-1 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (CA INDEX NAME)

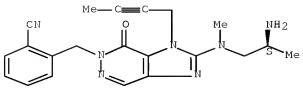


RN 866933-12-2 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(3-methyl-1-isoquinolinyl)methyl]- (CA INDEX NAME)

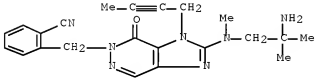


RN 866933-14-4 USPATFULL
CN Benzonitrile, 2-[[2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.

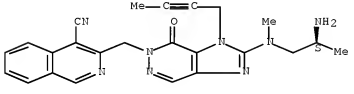


RN 866933-15-5 USPATFULL
CN Benzonitrile, 2-[[2-[(2-amino-2-methylpropyl)methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)



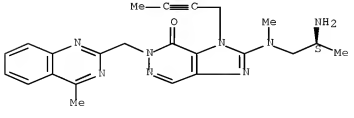
RN 866933-16-6 USPATFULL
CN 4-Isoquinolinecarbonitrile, 3-[[2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



RN 866933-17-7 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (CA INDEX NAME)

Absolute stereochemistry.

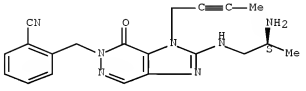


IT 866933-21-3P 866933-22-4P 866933-23-5P

866933-24-6P 866933-25-7P 866933-26-8P
866933-27-9P 866933-28-0P
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)

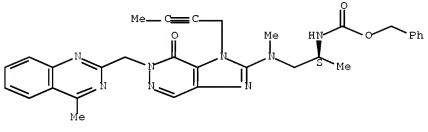
RN 866933-21-3 USPATFULL
CN Benzonitrile, 2-[[2-[[(2S)-2-aminopropyl]amino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



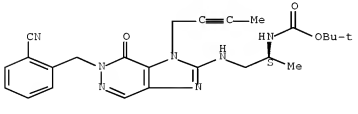
RN 866933-22-4 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6,7-dihydro-6-[(4-methyl-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

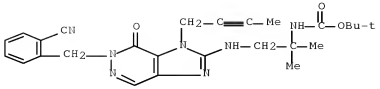


RN 866933-23-5 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

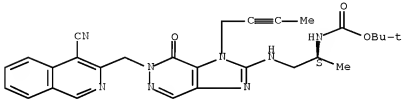


RN 866933-24-6 USPATFULL
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



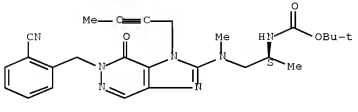
RN 866933-25-7 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

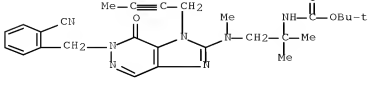


RN 866933-26-8 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

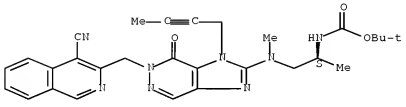


RN 866933-27-9 USPATFULL
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 866933-28-0 USPATFULL
CN Carbamic acid, [(1S)-2-[(1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L10 ANSWER 2 OF 8 USPATFULL on STN

ACCESSION NUMBER:	2006:118353 USPATFULL Full-text
TITLE:	Novel condensed imidazole derivatives
INVENTOR(S):	Yoshikawa, Seiji, Kamisu-machi, JAPAN Emori, Eita, Tsuchiura-shi, JAPAN Matsuura, Eumiyoshi, Tsukuba-shi, JAPAN Clark, Richard, Tsuchiura-shi, JAPAN Ikuta, Hironori, Ushiku-shi, JAPAN Kira, Kazunobu, Tsukuba-shi, JAPAN Yasuda, Nobuyuki, Ushiku-shi, JAPAN Nagakura, Tadashi, Tsukuba-shi, JAPAN Yamazaki, Kazuto, Tsukuba-shi, JAPAN

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20060100199	A1	20060511	
APPLICATION INFO.:	US 2003-516971	A1	20030603	(10)
	WO 2003-JP7010		20030603	
			20050816	PCT 371 date

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS:	33
EXEMPLARY CLAIM:	1
LINE COUNT:	9372

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is related to compounds represented by the following formula, or salts or hydrates thereof ##STR1## wherein,

T.sup.1 represents a 4- to 12-membered heterocyclic group containing one or two nitrogen atoms in the ring, which is a monocyclic or bicyclic structure that may have one or more substituents;

X represents a C.sub.1-6 alkyl group which may have one or more substituents, or such;

Z.sup.1 and Z.sup.2 each independently represent a nitrogen atom or a group represented by the formula --CR.sup.2--;

R.sup.1 and R.sup.2 independently represent a hydrogen atom, a C.sub.1-6 alkyl

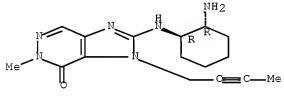
group which may have one or more substituents, or a C.sub.1-6 alkoxy group which may have one or more substituents, or such. These are novel compounds that exhibit an excellent

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 635722-38-2P 635722-40-6P
(preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)
RN 635722-38-2 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2R)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-37-1
CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

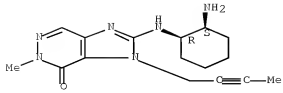
CRN 76-05-1
CMF C2 H F3 O2

RN 635722-40-6 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2S)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-39-3
CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

L10 ANSWER 3 OF 8 USPATFULL on STN

ACCESSION NUMBER:	2006:74738 USPATFULL Full-text
TITLE:	Condensed imidazole derivatives
INVENTOR(S):	Yoshikawa, Seiji, Kashima-gun, JAPAN Emori, Eita, Tsuchiura-shi, JAPAN Matsuura, Fumiyoshi, Tsukuba-shi, JAPAN Clark, Richard, Tsuchiura-shi, JAPAN Ikuta, Hironori, Ushiku-shi, JAPAN Kira, Kazunobu, Tsukuba-shi, JAPAN Yasuda, Nobuyuki, Ushiku-shi, JAPAN Nagakura, Tadashi, Tsukuba-shi, JAPAN Yamazaki, Kazuto, Tsukuba-shi, JAPAN
PATENT ASSIGNEE(S):	Eisai Co., Ltd., Bunkyo-ku, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20060063787	A1	20060323
APPLICATION INFO.:	US 2005-212407	A1	20050826 (11)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2003-457002, filed on 6 Jun 2003, ABANDONED		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2002-307750	20021023
	JP 2002-209373	20020718
	JP 2002-166069	20020606

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS:	33
EXEMPLARY CLAIM:	1
LINE COUNT:	9256

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is related to compounds represented by the following formula, or salts or hydrates thereof ##STR1## wherein,

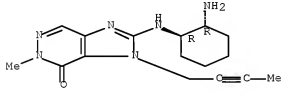
T.sup.1 represents a 4- to 12-membered heterocyclic group containing one or two nitrogen atoms in the ring, which is a monocyclic or bicyclic structure that may have one or more substituents;
X represents a C.sub.1-6 alkyl group which may have one or more substituents, or such;
Z.sup.1 and Z.sup.2 each independently represent a nitrogen atom or a group represented by the formula --CR.sup.2--;
R.sup.1 and R.sup.2 independently represent a hydrogen atom, a C.sub.1-6 alkyl group which may have one or more substituents, or a C.sub.1-6 alkoxy group which may have one or more substituents, or such. These are novel compounds that exhibit an excellent DPPIV-inhibiting activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 635722-38-2P 635722-40-6P
(preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)
RN 635722-38-2 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2R)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-37-1
CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

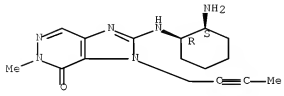
CRN 76-05-1
CMF C2 H F3 O2

RN 635722-40-6 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2S)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-39-3
CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

L10 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1130640 HCAPLUS Full-text
DOCUMENT NUMBER: 143:387050
TITLE: Preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-c]pyridinones as inhibitors of dipeptidylpeptidase IV
INVENTOR(S): Eckhardt, Matthias; Himmelsbach, Frank; Langkopf, Elke; Hauel, Norbert; Tadayyon, Mohammad; Thomas, Leo
PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany; Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097798	A1	20051020	WO 2005-EP3474	20050402

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

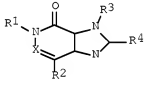
DE 102004017739	A1	20051027	DE 2004-102004017739	20040410
DE 102004025552	A1	20051222	DE 2004-102004025552	20040525
CA 2561210	A1	20051020	CA 2005-2561210	20050402
EP 1740589	A1	20070110	EP 2005-716507	20050402
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				
JP 20075317 80	T	20071108	JP 2007-506703	20050402
US 20050234235	A1	20051020	US 2005-102048	20050408
US 7179809	B2	20070220		
US 20070088038	A1	20070419	US 2006-609621	20061212

PRIORITY APPLN. INFO.:

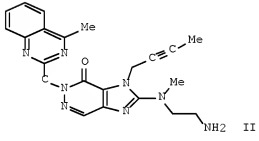
DE 2004-102004017739A		20040410
DE 2004-102004025552A		20040525
US 2004-568137P	P	20040505
US 2004-582265P	P	20040623
WO 2005-EP3474	W	20050402
US 2005-102048	A3	20050408

OTHER SOURCE(S): MARPAT 143:387050

GI



I

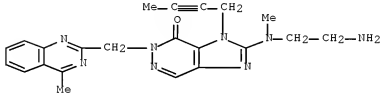


II

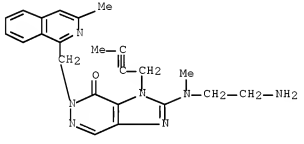
AB Title compds. I [R1 = arylmethyl, arylethyl, heteroarylmethyl, etc.; X = N or CR5; R5 = H or alkyl; R2 = H, aryl, heteroaryl, etc.; R3 = (un)substituted cycloalkenylmethyl, alkenyl, alkynyl, etc.; R4 = NR6R7; R6 = H, alkyl, cycloalkyl, etc.; R7 = (un)substituted alkyl-R8; R8 = amino or alkylamino] and their pharmaceutically acceptable salts, are prepared and disclosed as inhibitors of dipeptidylpeptidase IV (DPP-IV). Thus, e.g., II was prepared by amination of 2-bromo-3-(2-buten-1-yl)-5-[(4-methyl- chinazolin-2-yl)-methyl]-3,5-dihydro[4,5-d]pyridazin-4-one (preparation given) with N-methyl-ethylenediamine. The activity of I was evaluated using fluorescence inhibition assays and it was revealed that selected compds. of the invention possessed IC50 values in the range of 1 up to 336 nM. I as inhibitor of DPP-IV should prove useful in the treatment of diseases such as but not limited to diabetes, obesity and arthritis. Pharmaceutical compns. comprising I are disclosed.

IT 866933-11-1P 866933-12-2P 866933-14-4P
866933-15-5P 866933-16-6P 866933-17-7P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)

RN 866933-11-1 HCAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (CA INDEX NAME)

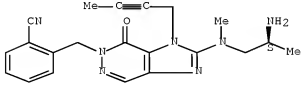


RN 866933-12-2 HCAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(3-methyl-1-isoquinolinyl)methyl]- (CA INDEX NAME)

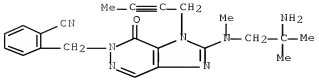


RN 866933-14-4 HCAPLUS
CN Benzonitrile, 2-[[2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.

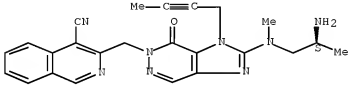


RN 866933-15-5 HCAPLUS
CN Benzonitrile, 2-[[2-[(2-amino-2-methylpropyl)methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)



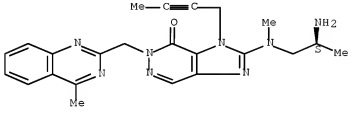
RN 866933-16-6 HCAPLUS
CN 4-Isoquinolinecarbonitrile, 3-[[2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



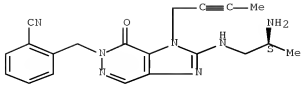
RN 866933-17-7 HCAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (CA INDEX NAME)

Absolute stereochemistry.



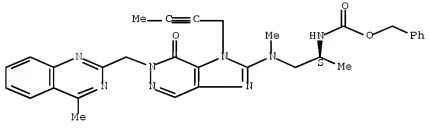
IT 866933-21-3P 866933-22-4P 866933-23-5P
866933-24-6P 866933-25-7P 866933-26-8P
866933-27-9P 866933-28-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)
RN 866933-21-3 HCAPLUS
CN Benzonitrile, 2-[[2-[[(2S)-2-aminopropyl]amino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



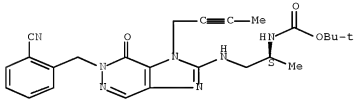
RN 866933-22-4 HCAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6,7-dihydro-6-[(4-methyl-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

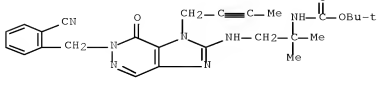


RN 866933-23-5 HCAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

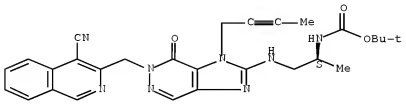


RN 866933-24-6 HCAPLUS
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



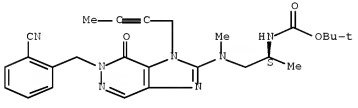
RN 866933-25-7 HCAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

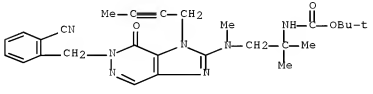


RN 866933-26-8 HCAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

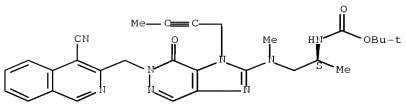


RN 866933-27-9 HCAPLUS
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 866933-28-0 HCAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 8 USPATFULL on STN

ACCESSION NUMBER: 2005:268915 USPATFULL Full-text

TITLE: 2-Amino-imidazo[4,5-d]pyridazin-4-ones, their preparation and their use as pharmaceutical compositions

INVENTOR(S): Eckhardt, Matthias, Biberach, GERMANY, FEDERAL REPUBLIC OF
Himmelsbach, Frank, Mittelbiberach, GERMANY, FEDERAL REPUBLIC OF
Langkopf, Elke, Warthausen, GERMANY, FEDERAL REPUBLIC OF
Hauel, Norbert, Schemmerhofen, GERMANY, FEDERAL REPUBLIC OF
Tadayyon, Mohammad, Ulm, GERMANY, FEDERAL REPUBLIC OF
Thomas, Leo, Biberach, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): Boehringer Ingelheim International GmbH, Ingelheim, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

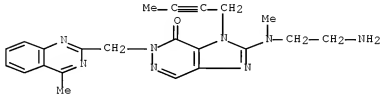
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20050234235	A1	20051020
	US 7179809	B2	20070220
APPLICATION INFO.:	US 2005-102048	A1	20050408 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2004-10200	20040410
	DE	20040525
	US 2004-568137P	20040505 (60)
	US 2004-582265P	20040623 (60)

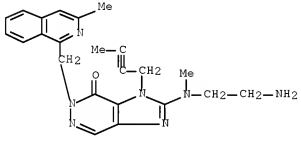
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MICHAEL P. MORRIS, BOEHRINGER INGELHEIM CORPORATION, 900 RIDGEBURY ROAD, P. O. BOX 368, RIDGEFIELD, CT, 06877-0368, US
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 1348
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to 2-amino-imidazo[4,5-d]pyridazin-4-ones and 2-amino-imidazo[4,5-c]pyridin-4-ones of general formula ##STR1## wherein R.sup.1 to R.sup.4 and X are defined as in claims 1 to 6, the tautomers, the enantiomers, the diastereomers, the mixtures thereof and the salts thereof, which have valuable pharmacological properties, particularly an inhibiting effect on the activity of the enzyme dipeptidylpeptidase-IV (DPP-IV).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 866933-11-1P 866933-12-2P 866933-14-4P
866933-15-5P 866933-16-6P 866933-17-7P
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)
RN 866933-11-1 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (CA INDEX NAME)

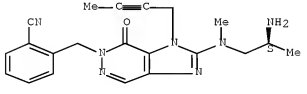


RN 866933-12-2 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(3-methyl-1-isoquinolinyl)methyl]- (CA INDEX NAME)

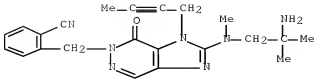


RN 866933-14-4 USPATFULL
CN Benzonitrile, 2-[[2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.

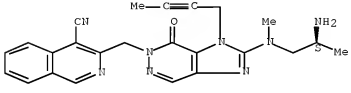


RN 866933-15-5 USPATFULL
CN Benzonitrile, 2-[[2-[(2-amino-2-methylpropyl)methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)



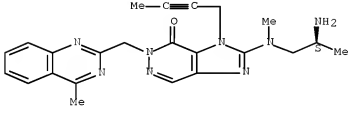
RN 866933-16-6 USPATFULL
CN 4-Isoquinolinecarbonitrile, 3-[[2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



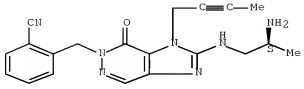
RN 866933-17-7 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(2S)-2-aminopropyl]methylamino]-3-(2-butyn-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (CA INDEX NAME)

Absolute stereochemistry.



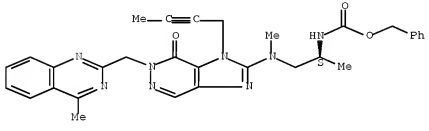
IT 866933-21-3P 866933-22-4P 866933-23-5P
866933-24-6P 866933-25-7P 866933-26-8P
866933-27-9P 866933-28-0P
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)
RN 866933-21-3 USPATFULL
CN Benzonitrile, 2-[[2-[[(2S)-2-aminopropyl]amino]-3-(2-butyn-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



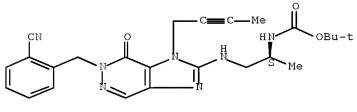
RN 866933-22-4 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6,7-dihydro-6-[(4-methyl-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

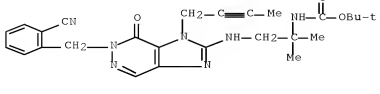


RN 866933-23-5 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

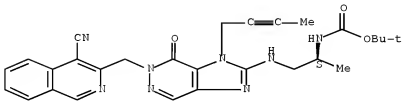


RN 866933-24-6 USPATFULL
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



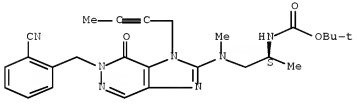
RN 866933-25-7 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

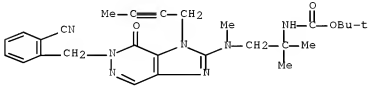


RN 866933-26-8 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

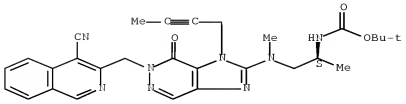


RN 866933-27-9 USPATFULL
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 866933-28-0 USPATFULL
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L10 ANSWER 6 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2004:152106 USPATFULL Full-text
TITLE: Condensed imidazole derivatives
INVENTOR(S): Yoshikawa, Seiji, Kashima-gun, JAPAN
Emori, Eita, Tsuchiura-shi, JAPAN
Matsuura, Fumiyoshi, Tsukuba-shi, JAPAN
Clark, Richard, Tsuchiura-shi, JAPAN
Ikuta, Hironori, Ushiku-shi, JAPAN
Kira, Kazunobu, Tsukuba-shi, JAPAN
Yasuda, Nobuyuki, Tsuchiura-shi, JAPAN
Nagakura, Tadashi, Ushiku-shi, JAPAN
Yamazaki, Kazuto, Tsukuba-shi, JAPAN
PATENT ASSIGNEE(S): Eisai Co., Ltd., Tokyo, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20040116328	A1	20040617
APPLICATION INFO.:	US 2003-457002	A1	20030606 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2002-166069	20020606
	JP 2002-209373	20020718
	JP 2002-307750	20021023

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
LINE COUNT: 9667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is related to compounds represented by the following formula, or salts or hydrates thereof ##STR1##

wherein,

T.sup.1 represents a 4- to 12-membered heterocyclic group containing one or two nitrogen atoms in the ring, which is a monocyclic or bicyclic structure that may have one or more substituents;

X represents a C.sub.1-6 alkyl group which may have one or more substituents, or such;

Z.sup.1 and Z.sup.2 each independently represent a nitrogen atom or a group represented by the formula --CR.sup.2--;

R.sup.1 and R.sup.2 independently represent a hydrogen atom, a C.sub.1-6 alkyl group which may have one or more substituents, or a C.sub.1-6 alkoxy group which may have one or more substituents, or such.

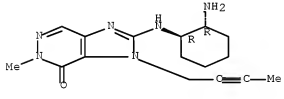
These are novel compounds that exhibit an excellent DPPIV-inhibiting activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 635722-38-2P 635722-40-6P
(preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)
RN 635722-38-2 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2R)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-37-1
CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

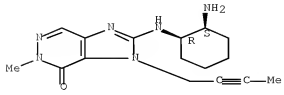
RN 635722-40-6 USPATFULL
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2S)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-39-3

CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

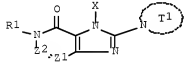
L10 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:991509 HCAPLUS Full-text
DOCUMENT NUMBER: 140:42192
TITLE: Preparation of purinone derivatives as dipeptidylpeptidase IV (DPP-IV) inhibitors
INVENTOR(S): Yoshikawa, Seiji; Emori, Eita; Matsuura, Fumiyoshi; Richard, Clark; Ikuta, Hironori; Kira, Kazunobu; Yasuda, Nobuyuki; Nagakura, Tadashi; Yamazaki, Kazuto
PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan
SOURCE: PCT Int. Appl., 376 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104229	A1	20031218	WO 2003-JP7010	20030603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2485641	A1	20031218	CA 2003-2485641	20030603
AU 2003241960	A1	20031222	AU 2003-241960	20030603

EP 1514552	A1	20050316	EP 2003-733276		20030603
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003011697	A	20050322	BR 2003-11697		20030603
JP 3675813	B2	20050727	JP 2004-511299		20030603
CN 1675208	A	20050928	CN 2003-818968		20030603
TW 273104	B	20070211	TW 2003-92115068		20030603
CN 1931859	A	20070321	CN 2006-10151528		20030603
RU 2297418	C2	20070420	RU 2004-139111		20030603
NZ 536794	A	20070427	NZ 2003-536794		20030603
US 20040116328	A1	20040617	US 2003-457002		20030606
JP 2005145951	A	20050609	JP 2004-249414		20040830
MX 2004PA12226	A	20050408	MX 2004-PA12226		20041206
IN 2004CN02990	A	20060217	IN 2004-CN2990		20041231
ZA 2005000041	A	20060601	ZA 2005-41		20050104
NO 2005000054	A	20050210	NO 2005-54		20050105
US 20060100199	A1	20060511	US 2005-516971		20050816
US 20060063787	A1	20060323	US 2005-212407		20050826
IN 2006CN03553	A	20070706	IN 2006-CN3553		20060926
PRIORITY APPLN. INFO.:			JP 2002-166069	A	20020606
			JP 2002-209373	A	20020718
			JP 2002-307750	A	20021023
			CN 2003-818968	A3	20030603
			JP 2004-511299	A3	20030603
			WO 2003-JP7010	W	20030603
			US 2003-457002	B1	20030606
			IN 2004-CN2990	A3	20041231

OTHER SOURCE(S): MARPAT 140:42192

GI



I

AB The title compds. I [wherein T1 is an optionally substituted, monocyclic or bicyclic, 4- to 12-membered, heterocyclic group containing one or two nitrogen atoms in the ring; X is optionally substituted C1-6 alkyl, etc.; Z1 and Z2 each independently is nitrogen, CR2; and R1 and R2 each independently is hydrogen, optionally substituted C1-6 alkyl, optionally substituted C1-6 alkoxy, etc.] are prepared Compds. of this invention in vitro showed IC50 values of 0.001 μM to 1.48 μM against dipeptidylpeptidase IV.

IT 635722-38-2P 635722-40-6P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)

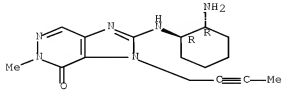
RN 635722-38-2 HCAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2R)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-37-1
CMF C16 H22 N6 O

Absolute stereochemistry.



CM 2

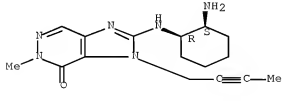
CRN 76-05-1
CMF C2 H F3 O2

RN 635722-40-6 HCAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[(1R,2S)-2-aminocyclohexyl]amino]-3-(2-butyn-1-yl)-3,5-dihydro-5-methyl-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

CM 1

CRN 635722-39-3
CMF C16 H22 N6 O

Absolute stereochemistry.

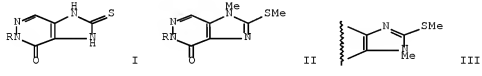


CM 2

CRN 76-05-1
CMF C2 H F3 O2

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

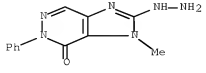
L10 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1983:612483 HCAPLUS Full-text
DOCUMENT NUMBER: 99:212483
ORIGINAL REFERENCE NO.: 99:32702h,32703a
TITLE: Heterocyclic hydrazines and hydrazones. IV. Synthesis of hydrazine derivatives in the [4,5-d]imidazo-4-pyridazinone series
AUTHOR(S): Beljean-Leymarie, Martine; Pays, Michel; Richer, Jean Claude
CORPORATE SOURCE: UER Sci. Pharm., Caen, 14032, Fr.
SOURCE: Canadian Journal of Chemistry (1983), 61(11), 2563-6
CODEN: CJCHAG; ISSN: 0008-4042
DOCUMENT TYPE: Journal
LANGUAGE: French
OTHER SOURCE(S): CASREACT 99:212483
GI



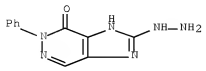
I II III

AB Imidazopyridazinones I (R = Me, Ph) were prepared from the corresponding diaminopyridazinones by cyclocondensation with CS2. Methylation of I gave mixts. of II and III, whose structures have been established by the Overhauser effect. The imidazopyridazinones are used for preparation of hydrazines and hydrazones. The mass spectra of several key intermediates are presented and discussed.

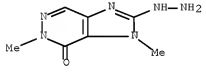
IT 87946-47-2 87946-48-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(of thioxoimidazopyridazinones)
RN 87946-47-2 HCAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-3-methyl-5-phenyl-, 2-hydrazone (9CI) (CA INDEX NAME)



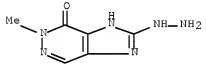
RN 87946-48-3 HCAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-5-phenyl-, 2-hydrazone (9CI) (CA INDEX NAME)



IT 87946-44-9P 87946-45-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 87946-44-9 HCAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-3,5-dimethyl-, 2-hydrazone (9CI) (CA INDEX NAME)



RN 87946-45-0 HCAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-5-methyl-, 2-hydrazone (9CI) (CA INDEX NAME)



SEARCH HISTORY

```
=> d his ful

     (FILE 'HOME' ENTERED AT 16:08:34 ON 26 JUN 2008)

     FILE 'HCAPLUS' ENTERED AT 16:08:59 ON 26 JUN 2008
                E SEIJI YOSHIKAWA/AU
                E EMORI EITA/AU
L1           16 SEA ABB=ON  ("EMORI E"/AU OR "EMORI EITA"/AU)
                E YOSHIKAWA SEIJI/AU
L2           74 SEA ABB=ON  "YOSHIKAWA SEIJI"/AU
L3            3 SEA ABB=ON  L1 AND L2
                D TI 1-3
L4            1 SEA ABB=ON  L3 AND ?IMIDAZOL?
                D TI
                SELECT RN L4 1-1
                D AB

     FILE 'REGISTRY' ENTERED AT 16:11:19 ON 26 JUN 2008
L5              STR
L6            0 SEA SSS SAM L5
L7           22 SEA SSS FUL L5

     FILE 'HCAPLUS' ENTERED AT 16:14:38 ON 26 JUN 2008
L8            3 SEA ABB=ON  L7

     FILE 'USPATFULL' ENTERED AT 16:15:05 ON 26 JUN 2008
L9            5 SEA ABB=ON  L7

     FILE 'HCAPLUS, USPATFULL' ENTERED AT 16:15:13 ON 26 JUN 2008
L10           8 DUP REMOV L8 L9 (0 DUPLICATES REMOVED)
                E MATSUURA FUMIYOSHI/AU
L11          51 SEA ABB=ON  "MATSUURA FUMIYOSHI"/AU
                E CLARK RICHARD/AU
L12         124 SEA ABB=ON  "CLARK RICHARD"/AU
                E IKUTA HIRONORI/AU
L13          68 SEA ABB=ON  "IKUTA HIRONORI"/AU
                E KIRA KAZUNOBU/AU
L14          26 SEA ABB=ON  "KIRA KAZUNOBU"/AU
                E YASUDA NOBUYUKI/AU
L15         125 SEA ABB=ON  "YASUDA NOBUYUKI"/AU
                E NAGAKURA TADASHI/AU
L16          37 SEA ABB=ON  "NAGAKURA TADASHI"/AU
                E YAMAZAKI KAZUTO/AU
L17           3 SEA ABB=ON  L1 AND L2 AND L11 AND L12 AND L13 AND L14 AND L15
                AND L16

     FILE 'HCAPLUS' ENTERED AT 16:18:33 ON 26 JUN 2008
L18           1 SEA ABB=ON  L1 AND L2 AND L11 AND L12 AND L13 AND L14 AND L15
                AND L16
                SELECT L18 RN 1-1

     FILE 'REGISTRY' ENTERED AT 16:19:04 ON 26 JUN 2008
L19           5 SEA ABB=ON  (50-99-7/BI OR 54249-88-6/BI OR 89750-14-1/BI OR
                9004-10-8/BI OR 915132-86-4/BI)

     FILE 'HCAPLUS' ENTERED AT 16:19:11 ON 26 JUN 2008
L20           1 SEA ABB=ON  L18 AND L19
```

FILE HOME

FILE HCAPLUS

FILE COVERS 1907 - 26 Jun 2008 VOL 148 ISS 26
FILE LAST UPDATED: 25 Jun 2008 (20080625/ED)

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 25 JUN 2008 HIGHEST RN 1030702-50-1
DICTIONARY FILE UPDATES: 25 JUN 2008 HIGHEST RN 1030702-50-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Jun 2008 (20080626/PD)
FILE LAST UPDATED: 26 Jun 2008 (20080626/ED)
HIGHEST GRANTED PATENT NUMBER: US7392547
HIGHEST APPLICATION PUBLICATION NUMBER: US20080155725
CA INDEXING IS CURRENT THROUGH 26 Jun 2008 (20080626/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jun 2008 (20080626/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2008
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2008

USPATFULL now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2008.